Working at a Watershed Level

California State University Fresno

Fresno, California

Course Schedule

June 3-7, 2002

Monday, June 3

12:00 noon – 12:45 pm	**Check-In and Registration**
12:45-1:45 pm	**Welcome and Introductions**
1:45-2:00 pm	**Why Work at a Watershed Level?** *Resource integration; cooperative approaches, holistic planning/management; coordination of efforts, synergy through public outreach/education and stakeholder involvement*
2:00-2:20 pm	**Overview of Watershed Components** *An overview of watershed components, including instream habitat, riparian and stream corridor zones, upland land uses/cover, rural and urban components, agricultural impacts, and impacts from other activities*
2:20-2:35 pm	**Break**
2:35-3:40 pm	**Group Exercise: Challenges and Solutions** *What are the major water quality and aquatic habitat challenges in the San Joaquin River basin? What opportunities exist for addressing these challenges? What is the political, economic, and social climate for pursuing these opportunities? Break-out groups will address these questions and report back.*
3:40-4:00 pm	**Class Discussion of Watershed Issues** *Facilitated discussion on the challenges and opportunities identified by the break-out groups during the previous session.*
4:00-5:00 pm	**Case Studies I: Clean Water Act**
5:00-6:30 pm	**Reception at CSU Fresno** **Sponsor: TBA** **Poster session:** *Contact CSU Fresno Geology Department for more information.*

Tuesday, June 4

8:00 - 9:10 am	**Hydrologic and Geomorphic Processes in the Watershed** *Landscape-defining processes – geological, climatological, hydrological; watersheds and their development at various spatial and temporal scales*
9:10-9:25 am	**Break**
9:25-10:35 am	**Biological Components and Interactions** *How physical setting (geology, hydrology, climate) defines habitat conditions and influences biotic diversity; general discussion of energy and materials transport, food webs, symbioses, and other ecological concepts*
10:35-10:50 am	**Break**
10:50-12:00 noon	**Agents of Change – Biological** *Discussion of how altered land use/cover, introduced (alien or exotic) species, riparian vegetation loss, and other agents of change affect biological communities in the stream corridor and watershed*
12:00 noon - 1:00 pm	**Lunch (on your own)**
1:00-2:10 pm	**Agents of Change – Geomorphic/Engineering** *Continuation of the discussion on agents of change, focusing this time on engineered or geomorphological changes such as dams, levees, diversions, channelization, dredging, etc. and their impact on flow sequences and velocities.*
2:10-2:25 pm	**Break**
2:25-3:35 pm	**Case Studies II: Indicators**
3:35-3:50 pm	**Break**
3:50-5:00 pm	**Case Studies III: Where Does San Joaquin River Water Go?**
6:00-7:30 pm	**Dinner on CSU-Fresno Campus**

Wednesday, June 5

8:00 - 9:10 am	**Watershed Assessment I:** *Biological assessment techniques, including macro invertebrate assays, habitat evaluation procedures, indices of biological integrity, riparian vegetation or land cover characterization, structure/function analyses, etc.*
9:10-9:25 am	**Break**

9:25-10:35 am	**Case Studies IV: The Regulated Watershed** *A review of the major differences between regulated and unregulated streams and how to apply restoration science.*
10:35-10:50 am	**Break**
10:50-12:00 noon	**Watershed Assessment II:** *Basics of assessing water quality and watershed conditions using morphological, physical, and chemical parameters.*
12:00 noon - 1:00 pm	**Lunch on the Bus**
1:00-5:00 pm	**Field Trip: Field Data Collecting at Milburn/Hansen Farm Restoration Project** *Biological Component (macro invertebrates, habitat, vegetation):* Morgan Hannaford, Shasta Community College *Geomorphic Component (valley shape, sinuosity, channel type/slope, etc)*

Thursday, June 6

8:00 - 9:10 am	**Outreach and Education: Building Awareness and Support**
9:10-9:25 am	**Break**
9:25-10:35 am	**Stakeholder Involvement – "Challenges and Changes"** *A discussion of driving forces, internal programmatic/management goals, degree of stakeholder involvement needed, managing meetings, dealing with conflict, and decision-making approaches.*
10:35-10:50 am	**Break**
10:50-12:00 noon	**Case Studies V: TMDL's – Panel Discussion**
12:00 noon - 12:15 pm	**Break**
12:15-1:15 pm	**Bag Lunch on the Bus (note: buses depart at 12:30 sharp!)**
1:15 - 4:15 pm	**Field Trip: Kings River Tour**
5:00 - 6:30 pm	**Evening Social: Coke Hallowell Center for River Studies** *Hosted by the San Joaquin River Parkway & Conservation Trust (sign-up sheet available)*

Friday, June 7

8:00 - 9:10 am	**Watershed Planning: Identifying Problems and Opportunities**
	How can we better coordinate watershed planning and management activities? *Do we need to do a full-blown plan every time we address an issue?* *How important are individual stakeholders in the process?* *An interactive discussion probing these and other questions on planning.*
9:10-9:25 am	**Break**
9:25-10:35 am	**Case Studies VI: Watershed Goals, Objectives, & Restoration Alternatives**
10:35-10:50 am	**Break**
10:50-12:00 noon	**Funding Sources**
	What do funding organizations look for? How important is it to secure support from local government and citizens? Just what is a funding proposal, anyhow? This session will provide an overview of funding sources and how to tap into the resources and expertise they offer.
12:00 noon	**Evaluation forms completed and collected; course adjourns**
	Drive safely, and don't forget to work on your watershed!

PARTIAL LIST OF PRESENTERS

Barry Tonning, Tetra-Tech, Inc.

Morgan Hannaford, Shasta Community College

Mike Harvey, Mussetter Engineering, Inc.

Jenna Olsen, Tuolumne River Preservation Trust

Brian Beale, California Dept. of Fish & Game

Rhonda Reed, California Dept. of Fish & Game

Deborah North, San Joaquin River Parkway & Conservation Trust

Roland Brady, California State University, Fresno

Sabrina Drill, River Mountain Conservancy

Doug DeFlitch, Friant Water User's Authority

Jeffrey Halstead, Kings River Conservation District